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NON-LETHAL WEAPONS IN MILITARY OPERATIONS OTHER THAN WAR (U)

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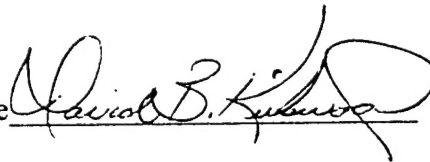
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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract of

NON-LETHAL WEAPONS IN MILITARY OPERATIONS OTHER THAN WAR

Although American forces are superbly armed with lethal weapons to accomplish MOOTW, they possess little in the way of *non-lethal* weapons to accomplish missions that require the application of less than lethal force: as was evidenced in Somalia during Operation Restore Hope. Technological advances in the area of non-lethal weaponry, however, now gives rise to the argument that these types of weapons, when used in concert with lethal weapons, are viable and important tools for enhancing operational success in future MOOTW.

Advantages and disadvantages of non-lethal weapons must be carefully weighed in light of their potential for enhancing operational success in MOOTW. Critical factors such as: issues regarding risk, rules of engagement, restraint, legal ramifications, training, command and control, economics, and interoperability must also be closely examined to judge the potential effectiveness and impact that non-lethal weapons might have on determining success in MOOTW.

In the overall operational scheme, non-lethal weapons will produce a synergistic effect by tying together all the principles of MOOTW: security, legitimacy, unity of effort, restraint, perseverance, and objective. Additionally, they enhance operational capability in MOOTW by bridging the gap between minimal force and lethal force. Consequently, it is justifiable that non-lethal weapons be available to operational commanders in future military operations other than war.

NON-LETHAL WEAPONS IN MILITARY OPERATIONS OTHER THAN WAR

In the past decade, Armed Forces of the United States have been entangled in numerous military operations other than war (MOOTW). One of the more recent examples of American participation in an operation other than war was Somalia. The situation in Somalia was desperate. After the collapse of the Barre regime in 1991, there was no legitimate, centralized government. Over half a million Somalis died from starvation, and there was no foreseeable relief in the future as drought and famine persisted throughout the country. Heavily armed warlords and factions violently clashed as they looted the country and contended for power. As a country, Somalia was on the verge of disappearing from the face of the earth. In an attempt to save the country, the United States, along with 20 other countries, under the auspices of United Nations Security Council Resolutions 751, 794, and 814, entered Somalia in August 1992, to restore order and provide humanitarian relief.¹ Confronted with warring clans, bandits, riotous mobs, and hundreds of thousands of starving Somalis, United States forces were faced with the daunting task of providing humanitarian relief while, simultaneously, conducting low intensity combat operations to restore order. Given the nature and scope of the mission, American forces were especially troubled when situations arose that required the application of less than lethal force. Although American forces were superbly armed with lethal weapons, when faced with the non-traditional role of controlling looters, and unruly mobs of starving people, they possessed little in the way of non-lethal weapons

¹ Kenneth Allard, Somalia Operations: Lessons Learned (Washington: National Defense University Press, Ft. McNair, 1995), 15.

to aid in accomplishing their mission. Had commander's had a variety of non-lethal weapons at their disposal throughout operations in Somalia, it is quite possible the outcome would have ended more favorably. As it turned out, the mission to restore hope in Somalia failed.² It will never be known if the mission would have ended in success had the U.S. forces had non-lethal weapons; however, the chances for success would have certainly been enhanced.

Given what took place in Somalia, what are the advantages and disadvantages of employing non-lethal weapons in future operations? What critical factors should operational commanders consider when confronted with the next Somalia, and what role can non-lethal weapons play in making those operations successful?

DEFINITION OF NON-LETHAL WEAPONS

To begin with, it is important that operational commanders have a working knowledge of the definition of non-lethal weapons to understand their purpose in MOOTW. Currently, there are a variety of definitions, none of which are exactly the same, for non-lethal weapons in both official and unofficial publications. The following definition, for purposes of general understanding, includes the principal elements of the many definitions for non-lethal weapons:

Non-lethal weapons are those weapons which are designed to deter or neutralize belligerents from achieving their desired aims. They are not designed or intended to kill or cause permanent harm. The effects of non-lethal weapons are intended to be temporary in nature, reversible, and their use should cause a minimum of collateral damage to innocent bystanders and property.

² Frederick M. Lorenz, Col., USMC, "Less-Lethal" Force in Operation United Shield," Marine Corps Gazette, September 1995, 69.

With this definition in mind, one can now examine the types of non-lethal weapons that may now, or in the future, be considered for use by operational commanders in MOOTW.

TYPES OF NON-LETHAL WEAPONS

There are a number of both high and low tech, non-lethal weapons available on the market today. The examples below, though not all inclusive, are perhaps the most practical for military application by an operational commander in military operations other than war. Some examples of the more technologically advanced non-lethal weapons are:³

- **Anti-Traction Superlubricants.** A liquid that is so slippery that it cannot be transited without the greatest difficulty. Targets would include sidewalks, streets, runways, ramps, railroads and stairs.
- **Low Energy Laser Weapons.** Small enough to be attached to an M16 and powered by a man portable battery pack. Designed to strobe colors throughout the color spectrum to disorient and cause temporary optical impairment. Multi-spectrum color sunglasses would be needed to defeat this weapon.
- **Isotropic Radiators.** A weapon that blooms with laser light intensity causing all who observe it to be temporarily blinded. It can be air dropped to illuminate large areas, or designed to be man-portable. It is suspected the Russians used this type of weapon in Afghanistan.
- **Infrasound.** A powerful, ultra-low frequency sound that causes disorientation and nausea. It is capable of penetrating most structures and vehicles.
- **Calmative Agents.** Calmative agents are sleep-inducing drugs that, when mixed with dimethyl sulfoxide (DMSO), are quickly absorbed through the skin. The agent is particularly effective if introduced into closed spaces through ventilation systems such as buildings or ships.
- **Polymer Agents.** Polymer agents are superadhesives that can quickly render both personnel and equipment useless for long periods of time. The cleanup process is, obviously, cumbersome and slow.
- **Liquid Metal Embrittlement.** Agents that change the molecular structure of metals, severely weakening them. They can be fast or slow acting and applied with a device as small as a fountain pen. They are effective against all types of metal.

Along with the above high-tech, non-lethal weapons, there are a variety of effective low-tech weapons available that can also be considered for use in MOOTW:⁴

³ Paul R. Evancoe, "Non-Lethal Technologies Enhance Warriors Punch," National Defense, December 1993, 26-29.

⁴ David H. Lyon, Less-Than-Lethal Weapons Development for Law Enforcement, ARL-TR-51. Aberdeen Proving Ground, Maryland: Army Research Laboratory, February 1993, 20-33.

- Soft Slug Projectiles. Rubber bullets fired from traditional weapons. Also, shot gun shells containing rubber pellets.
- Taser Weapon. A hand held weapon that shoots two metal barbs attached to a spool of fine wire. Once the barbs are attached to an individual or their clothing, electrical current passes through the wires sufficient to incapacitate the individual.
- Stun Gun. A hand held electrical device that has two electrodes through which electrical current passes. This weapon is strictly for close encounters.
- Chemical Agent, Tear. Typically delivered in a powder or aerosol liquid form. O-Chlorogenzylidene Malononitrile, known in the military as CS. The agent causes tearing and irritation to the sinuses and skin.
- Chemical Agent, Vomit. Though the use of this agent (Diphenylamine Chlorasine (DMA) is currently prohibited, it has the non-lethal effect of causing vomiting and flu-like symptoms.
- Central Nervous System Agents. There are a variety of agents in existence that can be used to incapacitate an individual by disrupting the central nervous system. There are anesthetics, analgesics, tranquilizing agents, anticholinergics and vomiting agents. The use of these type agents is somewhat risky because of the time required to take effect -- 30-60 seconds. A method of delivery is the dart gun.
- Foam Barrier. A sticky foam that can be laid down as a barrier up to six-feet high. The foam can be mixed with a CS agent.
- Kinetic Energy Weapons. A fancy name for batons, rifle butts and other like weapons.
- Cayenne Pepper Spray. Pepper spray produces the same symptoms as tear agent (CS). It is delivered by a hand held spray can, and can be used up to a distance of 30 feet.
- Entanglement. Netting or stream of nylon fired from a vehicle mounted delivery system.

Although the above types of non-lethal weapons are not all inclusive, it is readily apparent that there are an array of non-lethal weapons available (or soon could be available) to operational commanders in future military operations other than war.

IMPORTANCE OF NON-LETHAL WEAPONS IN MOOTW

No longer confronted with the likelihood of global war with the Former Soviet Union, the United States military has become increasingly involved in military operations other than war both domestically and abroad. The United States considers itself obligated

to take action when nations in the world community suffer from the effects of natural disasters, internal strife, or economic collapse. The world is shrinking. There is scarcely an area in the world that is not connected to U.S. vital interests in some regard. Consequently, American forces, either unilaterally or under the banner of the United Nations, have responded to a number of natural disasters, humanitarian relief efforts, counter-drug operations, and peacekeeping missions around the globe, in what now seems to be a never ending cycle. Given this trend toward increased participation in military operations other than war, particularly humanitarian relief missions, it logically follows that it will be advantageous for operational commanders to have non-lethal weapons in their armories for use in bridging the gap between no force and lethal force.

To underscore this point, the pentagon has moved up on its list of priorities the importance of non-lethal weapons. In an article for International Defense Review, Barbara Starr wrote, "In 1994, Deputy Defense Secretary, John Deutch ordered the Departments of Defense and Energy to expand the development of non-lethal technology. The effort was aimed at establishing funding priorities and long-term spending plans."⁵ In the same article she further stated, "since the headline-grabbing actions in Somalia and Bosnia, the Pentagon is more willing to acknowledge that it has plans for dealing in a less-than-lethal fashion with difficult peacekeeping or even peace-enforcement operations."⁶ These comments clearly indicate the importance the Defense Department is attaching to non-lethal weapons for use in future military operations.

⁵ Barbara Starr, "Pentagon Maps Non-Lethal Options," International Defense Review, July 1994, 30.

⁶ *ibid.*

ADVANTAGES OF NON-LETHAL WEAPONS IN MOOTW

Although non-lethal weapons are not a remedy for all situations regarding application of force in MOOTW, they most certainly expand the options available to decision makers at all levels of command. As John Collins wrote in a report to Congress, "non-lethal weapons expand options, complicate enemy decision making, and thereby promote greater freedom of action in the gap between relatively benign pressures (diplomacy, economic sanctions, military posturing), and deadly force."⁷ The key to the advantages of non-lethal weapons are that they *expand options*. They do not, however, serve as stand alone weapons with which to accomplish missions in military operations other than war. American forces should always maintain their ability (for which they are primarily trained) to defeat any enemy by means of lethal force.⁸

The availability and use of non-lethal weapons in MOOTW *accommodates policies of restraint*. No longer is the use of deadly force the only way to deal with adversaries in a hostile environment. When restraint is ordered by higher authority during a particular mission or operation, non-lethal weapons enable leaders, when and where practicable, to limit casualties and reduce damage to surrounding property in accordance with their orders. The advantage, therefore, is that non-lethal weapons will provide commanders with the capability to more easily exercise restraint. Keeping casualties to a minimum will be of critical importance to achieving success in the long run.⁹

⁷ John M. Collins, Non-lethal Weapons and Operations: Potential Application and Practical Limitations." CRS Report for Congress, September 1995, 1.

⁸ John B. Alexander, Ph.D., "Non-lethal Weapons as Force Options for the Army," Los Alamos National Laboratory, Presented to: The National Research Council Board on Army Science and Technology (Washington D.C.: 28 March 1994), Introduction.

⁹ *ibid*.

Another advantage of non-lethal weapons is that the use of such weapons might be *politically less risky* if employed during MOOTW. When used in concert with lethal weapons in low risk operational environments, non-lethal weapons may not be as likely to raise the ire of the public when a requirement for the use of force arises. Consequently, there would be less chance the media would pick up on a story that might relate to American brutality, thus, reducing the chances that political and military leaders would have to defend their policies and actions to political pundits. Non-lethal weapons truly can fill the void left between no force and lethal force options. Moreover, the use of less than deadly weapons demonstrates to the entire world the United States' intent to act humanely, and is concerned with limiting casualties to the greatest extent possible. These types of actions could have lasting, beneficial political effects in the future.

Linked with the idea of political effectiveness, is the idea of *proportionality*. A decision to determine what type and what amount of force to be employed should always take into account what is appropriately proportionate to the requirement. Using a tank against an unarmed belligerent, obviously, is not proportionate to the requirement and, most certainly, would not be viewed as appropriate for the situation in the eyes of the world public (like the incident during the student protests in China's Tiananmen Square in 1989). The advantage, of course, is that commanders confronted with situations requiring non-lethal force will have the appropriate weapons and capability to do so. However, when deadly force is required, then all means necessary are appropriate.¹⁰

¹⁰ Ray Carlson, CDR, USN, JAGC, "Law of Armed Conflict" Lecture, U.S. Naval War College, Newport, RI: 2 May 1996.

Another potential advantage of using non-lethal weapons is that, by nature of their purpose, they are non-escalatory. Use of these type weapons may inhibit the chances of a relatively benign situation from escalating to the point where lethal force becomes the only option. Use of weapons designed not to kill or permanently harm an individual sends a message that the users are concerned with the physical welfare of those against whom it is used. It clearly indicates that the users of such weapons are intent on exercising restraint and are in tune with issues surrounding human rights and suffering.

Non-lethal weapons are particularly advantageous to military forces conducting *operations within the United States*. Should military forces be required to assist in quelling domestic upheaval (such as the Los Angeles riots in 1992), or provide support for disaster relief (like that provided in Florida, in the aftermath of hurricane Andrew in 1992), non-lethal weapons would be particularly useful when dealing with crowd control or looters. Americans are very sensitive, however, to the use of military force against its citizenry. Therefore, a great deal of care must be exercised in this regard. Who can forget the disastrous consequences resulting from the National Guard's actions against student protesters at Kent State University in Ohio? Had the National Guard had a variety of non-lethal weapons at their disposal (other than tear gas), it is likely the incident would not have ended so tragically.¹¹ Should an operational commander of U.S. Regular Armed Forces be confronted with a similar situation in the future, it clearly would be advantageous for the troops to be armed with suitable, non-lethal weapons.

¹¹ Peter Davies, The Truth About Kent State (New York: Farrar Straus Giroux, 1973), 30-60.

Perhaps the greatest argument for non-lethal weapons, is the notion that they would enhance overall operational capability. When used in concert with lethal weapons, non-lethal weapons serve as a *force multiplier*. The addition of non-lethal weapons would provide operational commanders with expanded capabilities to accomplish missions throughout the spectrum of MOOTW. In the case of Somalia, operational commanders required the capability to deal with problems requiring both lethal and non-lethal force. When conducting humanitarian relief operations, however, the use of deadly force, often times, is not a viable option. Consequently, the addition of non-lethal weapons increases capability and will significantly enhance operational success.

While there are many compelling advantages arguing for the need for non-lethal weapons in MOOTW, there are a number of potential *disadvantages* that should be addressed when considering the use of non-lethal weapons.

DISADVANTAGES OF NON-LETHAL WEAPONS IN MOOTW

The use of non-lethal weapons might *encourage a sense of adventurism* on the part of opposition groups. They could become emboldened by the fact that some of the non-lethal weapons being used against them are only a minor irritant. Being less fearful, they might come to believe that short-term discomfort or pain is worth the risk of achieving their aims. Additionally, belligerents might become more adventurous, due to a belief that their opponents are operating from a position of weakness. For example, if adversaries are cognizant of specific American rules of engagement (ROE), they could

easily develop strategies and tactics to seriously limit the effectiveness of non-lethal weapons; thereby, exacerbating or prolonging the problem.

A striking counter to this argument was made by John B. Alexander in an unpublished article submitted to the Wall Street Journal:

"An argument goes that "Non-Lethal" would infer a position of weakness. Nothing is further from the truth and recent Persian Gulf activities have adequately demonstrated our lethal capabilities. We are advocating an integrated approach including lethal force when necessary. The focus is on expanding options for commanders, not in reducing capabilities."¹²

In this argument, the operative words are: *expanding options*, and *not reducing capabilities*. As previously discussed, non-lethal weapons are not to be used as a sole means of force. To achieve the maximum desired effect, they should always be integrated with the use, or threat of use, of lethal weapons. The bad guys need to know that the specter of death is always looming around the corner should less than lethal means fail.

There are several elements of *risk* associated with the use of non-lethal weapons in MOOTW. First, as alluded to previously, belligerents may know the ROE under which U.S. forces are operating.

This, however, can be ameliorated by properly integrating the use of non-lethal with lethal weapons.

Second, friendly forces can be subjected to the same effects of certain types of weapons as their adversaries: noxious gases, slippery surfaces, foam barriers and the like. Friendly force vehicles, for example, might inadvertently blunder onto surfaces coated with superlubricants or pass through areas clouded with tear gas.

¹² John B. Alexander, "Potential Non-Lethal Policy Issues," Los Alamos National Laboratory, unpublished paper, U.S. Naval War College (vertical file), Newport RI: undated.

A counter to this argument, however, is that it is reasonable to believe that sound planning, efficient training, and proper command and control will mitigate many of the problems in this regard.¹³

Third, there is always the risk that a young Marine or Soldier, when faced with an ambiguous situation regarding the use of force, might not use lethal force when lethal force is exactly what is required for the situation. In Somalia, there were so many pending Article 32 cases for inappropriate abuses of force, that many Soldiers became too hesitant to use lethal force. In one case, a Somali nearly killed a Marine with a knife because the Marine, rather than shoot the attacker, relied too heavily on his fellow Marines to ward off the attacker with pepper spray.¹⁴

Despite this concern, ambiguity has always been associated with the nature of armed conflict, whether it be in general war or MOOTW. The primary methods to deal with this problem, however, are to ensure that troops are properly trained, situationally aware, and know the rules of engagement.

Fourth, there is the risk that primary combat skills will diminish as American forces are used more and more for operations other than war. As front-line Marines and Soldiers participate repeatedly in operations other than war, they might lose their edge, as well as their combat skills.

Although there is the chance that troops would lose their combat skills, there is no empirical evidence to support this idea. During a congressional hearing before the Senate

¹³ Thomas E. Neven, "Non-lethal Weapons: Expanding our options," Marine Corps Gazette, December 1993, 61.

¹⁴ Jonathan T. Dworken, "Rules of Engagement, Lessons from Restore Hope," Military Review, September 1994, 31.

Armed Services Committee, LGen. Brandtner, Director of Operations (J-3), Joint Chiefs of Staff, testified in response to a question from Senator Warner that, "Marine expeditionary units that forward deploy at sea, and all U. S. Marine units, as a matter of fact, are trained in what we call civil affairs humanitarian type operations. They are, in fact, a part of the mission profile of the Marine expeditionary units."¹⁵ General Brandtner also stated that he strongly believes that, "we cannot allow our forces to be degraded by a focus on other than what they are designed to do."¹⁶ Based on LGen. Brandtner's comments, then, American Forces can effectively accomplish missions in operations other than war, provided they do not become too focused on such operations.

A final factor concerning the disadvantages of non-lethal weapons is *economics*. The non-lethal weapons program is not inexpensive. Already millions of dollars are being devoted to research and development for new technologies and for fielding and testing existing technologies. To continue the program at the current pace, cuts will have to come from elsewhere in the defense budget.¹⁷

Conversely, while it is true that the non-lethal weapons program is expensive, the underlying problem lies in the question of priorities, not in the economics of the program. If America's decision makers decide that MOOTW will be one of the primary focal points for its Armed Forces in the future, then defense spending will, necessarily, have to reflect appropriate funding levels for maintenance of the program. Since it does not appear there

¹⁵ Martin L. Brandtner, LGen., USMC, Director of Operations (J-3), Joint Chiefs of Staff, "Statements and Discussion," Committee on Armed Services United States Senate, Current Operations in Somalia, Hearings (Washington: U.S. Govt. Print. Off, 1993), 23-33.

¹⁶ *ibid.*

¹⁷ Barbara Starr, "Pentagon Maps Non-lethal Options," International Defense Review, July 1994, 30.

will be a downward trend in MOOTW, maintenance of the non-lethal weapons program appears to be justified.

After closer examination of some of the more relevant advantages and disadvantages of the uses of non-lethal weapons in MOOTW, it appears that the advantages far outweigh the disadvantages; especially in light of expectations that U.S. Forces will be involved in MOOTW on an increased basis. With this in mind, it will become increasingly important for operational commanders to be keenly aware of some of the more critical factors surrounding the use of non-lethal weapons in future MOOTW.

CRITICAL OPERATIONAL FACTORS OF NON-LETHAL WEAPONS IN MOOTW

One of the more critical factors in MOOTW, are the issues surrounding *rules of engagement*. Joint Publication 1-02, defines ROE as, "Rules which delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered."¹⁸ The complexity and problems associated with conducting combat operations in conjunction with humanitarian relief efforts or peacekeeping operations are mind-boggling. In Somalia, the problems associated with ROE were particularly vexing. Moreover, the problems were exacerbated by the fact that there were forces from 21 countries, along with a host of governmental and non-governmental organizations participating in the operation. With so many players, all from differing backgrounds and cultures, it was a monumental effort to get all the actors operating off the same sheet of music concerning the understanding of ROE and the

¹⁸ Joint Pub 1-02, Department of Defense Dictionary of Military and Associated Terms (Washington, D.C.: US Government Printing Office, 1 December 1989). 317.

principle of restraint. Compounding the problem, was the fact that it was extremely difficult to distinguish friend from foe. Often times, there was no way to identify or distinguish friendly Somalis from those who would throw objects or shoot weapons. Marines and Soldiers, on a moments notice, were often required to rapidly shift from assisting Somali people to conducting combat operations against many of the same people.¹⁹ Unfortunately, in the confusion of such an environment, mistakes are made and troops often find themselves in trouble for not strictly following the rules of engagement. Given the complexities of such tasks, particularly when interacting and operating with forces from nations with differing cultures, it is extremely important that ROE be clearly understood and controlled. Additionally, rules of engagement are not discretionary. They are established at the highest level of government and military command. The National Command Authority (NCA), and the military Commander-in-Chief (CINC), will establish the ROE for any given military operation. The success or failure of an operation might hinge on how well operational commanders, and the forces under their command, adhere to the rules. Kenneth Allard, in his book, Somalia Operations: Lessons Learned, pretty much synthesizes the issue regarding ROE in the following two quotes:²⁰

- "As important as they are, ROE are effective only to the extent that they can be understood and applied by the forces carrying out a peace operation: that means keeping the ROE simple, direct, and unclassified."

¹⁹ S.L. Arnold, MGen. US Army, "Somalia: An Operation Other Than War," Military Review, December 1993, 28-32.

²⁰ Kenneth Allard, Somalia Operations: Lessons Learned (Washington: National Defense University Press, Ft. McNair, 1995), 35.

- "ROE are not only life and death decisions but also critical elements in determining the success of failure of a peace operation: that means that the determination of ROE is a command decision."

Legal factors are critical when planning for the use of non-lethal weapons in MOOTW. Legal criteria, closely linked to issues surrounding the rules of engagement, govern the use of force and are based on international and United States law. Law of Armed Conflict is based primarily on Geneva Protocol. The United States, based on reviews of the protocol and other international actions, develops and employs non-lethal weapons based on the following three criteria:²¹

- "First, can this weapon legally be used? The protocols are then reviewed and then the next question may be asked."
- "Second, if the weapon is legal, is the proposed use of it legal? Three things are considered in a review of the laws of armed conflict: military necessity, humanity, and the rule of proportionality. The rule of proportionality requires the balancing of necessity with humanity."
- "Third, Principles governing weapons – they must not cause unnecessary suffering, produce indiscriminate effects, or violate restraints imposed by Custom or Treaty. Weapons may only be used against military objectives."

In connection with the above, "the United States follows the Department of Defense Instruction 5500.15 which requires that a weapon or munitions undergo a legal review during its development, and, prior to fielding, comply with international laws."²² The most critical legal problem confronting operational commanders in MOOTW, is the governing principle that, "Weapons may only be used against military objectives." This is

²¹ Unified Task Force Somalia, Office of the Staff Judge Advocate, "Operation Restore Hope After Action Report/Lessons Learned," 12 April 1995, 113-115.

²² *ibid.*

an extremely difficult principle for operational commanders to enforce; particularly in MOOTW, where there might be a number of countries working together. In every operation there are legal parameters and rules of engagement to be followed; however, communicating and enforcing them down to the tactical level is an extremely difficult task (as was evidenced in Somalia). Nevertheless, commanders must carefully weigh the legal difficulties they will be confronted with when considering the use of non-lethal weapons in MOOTW.

Training is a major consideration for successful employment of non-lethal weapons. The ability to make decisions and exercise good judgment in a rapidly changing, stressful environment requires a great deal of training. Operational commanders must ensure that their forces are thoroughly trained not only in the use of both lethal and non-lethal weapons, but they must also be trained in the non-traditional role of making, enforcing, and keeping peace in context of the rules of engagement. The use of non-lethal weapons will certainly enhance the probability for success of such operations; provided the force is properly trained and fully aware of the rules of engagement. CDR. Doug Smith pretty much sums it up in a paper written for the Naval War College when he said, "These type operations, perhaps more than any other type, connote the requirement for skills and training additional to those normally associated with general-purpose military forces."²³

Exercising and enforcing *restraint* is critically important to the success of MOOTW. Faced with Somalia-like operations in the future, commanders will have to carefully weigh how much force is necessary, within the confines of ROE, to successfully

²³ Douglas V. Smith, CDR, USN, "Training Requirements and Training Availability for United Nations Peacekeeping Forces," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1993, 3.

accomplish their mission with as few casualties as possible. Since there was considerable media attention devoted to Somalia, actions that resulted in casualties were closely scrutinized and widely reported (the so called CNN effect). Consequently, care in exercising restraint is extremely important for both military and political reasons. Under the topic of restraint, Army Field Manual 100-5, reinforces this point by stressing, "the use of excessive force could adversely affect efforts to gain legitimacy and impede the attainment of both short and long-term goals."²⁴ Obviously, lack of restraint impacts not only on the operational level, but on the strategic level as well. Therefore, it is imperative that operational commanders ensure that all forces under their command are aware of the potentially harmful effects of the inappropriate use of force. Given the nature of MOOTW, these are powerful arguments for employment of non-lethal weapons.

Commanders considering the use of non-lethal weapons in MOOTW, should also be concerned with the critical factors associated with *interoperability* and *command and control*. Like Somalia, where there were forces from 21 countries, including all branches of the United States Armed Services, operational commanders can expect similar composition of forces in future MOOTW. In an operational environment such as Somalia, the use of both lethal and non-lethal weapons will require particularly close coordination and supervision in matters regarding: culture and language; rules of engagement in relationship to restraint, force security, and mission accomplishment; chain of command and command authority; planning factors; and equipment interoperability and employment

²⁴ U.S. Department of the Army, Field Manual 100-5, Operations, June 1993, 13-4.

issues.²⁵ Interoperability and command and control is, without a doubt, are among the greatest challenges a commander will be confronted with in future MOOTW.

WHAT ROLE CAN NON-LETHAL WEAPONS PLAY IN MAKING MOOTW SUCCESSFUL?

Non-lethal weapons will contribute to the success of future MOOTW by producing a *synergistic effect* in the overall operational scheme. Combined with lethal weapons, non-lethal weapons aid in tying together all the principles of MOOTW: security, legitimacy, unity of effort, restraint, persistence, and objective.²⁶ They will also provide an operational commander with the ability to *bridge the gap* between no force and lethal force. In the arena of policy and strategy, the use of non-lethal weapons sends a message to the rest of the world that the United States is dedicated to fulfilling its policies of promoting stability, human rights, and thwarting aggression as peacefully as possible.

CONCLUSION

Currently, there is little in the way of concrete evidence that non-lethal weapons will be totally effective in large scale military operations other than war. On the other hand, there is little evidence to support that they will not be effective. To date, there are no examples where wide-scale, integrative use of non-lethal weapons have been operationally employed. Although LGen. Zinni, Commanding General, I MEF, Camp Pendleton, Ca., initiated actions to train a small force in the use of some types of non-

²⁵ Kenneth Allard, Somalia Operations: Lessons Learned (Washington: National Defense University Press, Ft McNair, 1995), 35,41,55,77.

²⁶ Joint Publication 3-07, Military Operations Other Than War (Washington D.C.: United States Government Printing Office, June 1995), II-6.

lethal weapons for use in Somalia, the weapons and tactics were never fully employed to the extent that they could be evaluated for effectiveness.²⁷ What is known, however, is that MOOTW appears to be on the rise; therefore, it is logical to assume that the United States will be on the point of the spear; whether to uphold democracy, restore order, or respond to disasters. In light of the benefits derived from the advantages of employing non-lethal weapons, it is both prudent and reasonable that non-lethal weapons be available to operational commanders in future military operations other than war.

²⁷ Frederick M. Lorenz, Col., USMC, "Less-Lethal Force in Operation United Shield," Marine Corps Gazette, September 1995, 70-72.

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